

APRIL/MAY 2025

**23IFMB14/23UFMB14 — INTRODUCTION
TO MICROBIAL WORLD**

Time : Three hours

Maximum : 75 marks

SECTION A — (10 × 2 = 20 marks)

Answer ALL questions.

1. What is spontaneous generation theory?
2. Define pure culture.
3. Define ecological niche.
4. Differentiate viroid and prion.
5. What is saprophyte?
6. Define recombinant DNA.
7. Define media.
8. What is the role of microbial culture collection centres? Give example.
9. Define refractive index.
10. Differentiate auxochrome and chromophore of stains.



SECTION B — ($5 \times 5 = 25$ marks)

Answer ALL questions.

11. (a) Write about the experiments proved biogenesis theory.

Or

- (b) Write a note on establishment of germ theory of diseases.

12. (a) List out the importance of microbial diversity study.

Or

- (b) List out the general characteristic features of viruses.

13. (a) Write a note on the impact of microorganisms on environment.

Or

- (b) What are the branches of microbiology? Give details.

14. (a) Give account on serial dilution to get pure culture.

Or

- (b) Tabulate various renowned culture collection centres across world.

15. (a) Write short note on phase contrast microscope.

Or

- (b) Discuss about classification of stains and staining methods.

SECTION C — ($3 \times 10 = 30$ marks)

Answer any THREE questions.

16. Give a detailed note on contributions of Winogradsky and Beijerinck.

17. Tabulate the difference between prokaryotes and eukaryotes.

18. Discuss on genetic engineering and its importance.

19. Explain the various microbial culture preservation methods.

20. Illustrate working principle, instrument and applications of TEM.

